

What Is Claimed Is:

1. A hybrid spread spectrum method for wirelessly transmitting wideband digital, the method comprising the steps of:

- 5 formatting the digital data based on a predetermined protocol;
dynamically allocating bandwidth to the formatted digital data based on a predetermined set of conditions;
coding the formatted digital data with a signal to obtain encoded digital data;
10 transmitting the encoded digital data at a plurality of different frequency bands, each of which has a center frequency so that each bit of digital data is sent at each of the different frequency bands substantially simultaneously;
and
dynamically changing the center frequencies in real-time in less than 100 milliseconds.

- 15 2. The method of claim 1 wherein the step of dynamically changing is performed in less than 10 milliseconds.

3. A hybrid spread spectrum method for receiving wideband digital data by reversing the steps of the method of claim 1.

4. A hybrid spread spectrum system for wirelessly transmitting wideband digital data, the system comprising:
20 means for formatting the digital data based on a predetermined protocol to obtain formatted digital data;
means for dynamically allocating bandwidth to the formatted digital data based on a predetermined set of conditions;

means for coding the formatted digital data with a signal to obtain encoded digital data;

means for transmitting the encoded digital data at a plurality of different frequency bands, each of which has a center frequency so that each bit of digital data is sent at each of the different frequencies substantially simultaneously; and

means for dynamically changing the center frequencies in real-time in less than 100 milliseconds.

5. The system as claimed in claim 4 wherein the means for dynamically changing changes the center frequencies in less than 10 milliseconds.

6. A hybrid spread spectrum system for wirelessly receiving encoded formatted wideband digital data, the system comprising:

means for decoding the encoded formatted digital data with a signal to obtain decoded formatted digital data;

means for deformatting the decoded formatted digital data based on a predetermined protocol to obtain the digital data;

means for dynamically deallocating bandwidth to the encoded formatted digital data based on a predetermined set of conditions;

means for receiving the wideband encoded formatted digital data at a plurality of different frequency bands, each of which has a center frequency so that each bit of digital data is received at several different frequency bands substantially simultaneously; and

means for dynamically changing the center frequencies in real-time in less than 100 milliseconds.

7. The system as claimed in claim 6 wherein the means for dynamically changing changes the center frequencies in less than 10 milliseconds.

5 coupling a single coaxial cable between the indoor unit and the outdoor unit; and

transmitting the control, power and RF signals between the indoor unit and the outdoor unit over the single coaxial cable.